ELSEVIER

Contents lists available at ScienceDirect

Journal of Forensic and Legal Medicine

journal homepage: www.elsevier.com/jflm



Review

A fatal case of suicidal stabbing and cutting

Francesco Ventura MD PhD (Researcher)*, Alessandro Bonsignore MD (Trainee), Massimo Gallo MD (Specialist), Federica Portunato MD (Trainee), Francesco De Stefano MD (Director, Professor)

Department of Legal and Forensic Medicine, University of Genova, Via de Toni 12, 16132 Genova, Italy

ARTICLE INFO

Article history: Received 25 September 2009 Accepted 22 December 2009 Available online 25 January 2010

Keywords: Suicide Self stabbing Self cutting Forensic pathology

ABSTRACT

A 36-year old male was found dead inside a pub bath lying in a pool of blood.

A small single-edged knife was discovered on the top of the water cistern. Multiple sharp weapon wounds at the usual sites of self-inflicted injuries were reported. It was possible to hypothesize a carotid artery injury as a bloodstain pattern compatible with high pressure blood exiting from a severed artery.

At autopsy 39 stab and incised wounds were found: the left forearm showed 13 incised wounds, one of which deep enough to sever the radial artery, while 14 ones were found on the right forearm. Neck observation revealed three deep cut injuries but none reached the internal jugular vein or the carotid artery. On the chest there were nine stab wounds, one of which injured the heart apex leading to a 80 ml haemopericardium. Toxicological screening resulted as negative.

Death was attributed to haemorrhagic shock following left radial artery injury.

On the basis of circumstantial evidences and autopsy findings, there was no doubt that this was a suicide.

The authors suggest that a complete forensic approach by means of scene investigation, autopsy as well as toxicological analysis is fundamental in discriminating between homicide and suicide.

© 2010 Elsevier Ltd and Faculty of Forensic and Legal Medicine. All rights reserved.

1. Introduction

Multiple stab and incised wounds are quite rare as suicide method, accounting for only the 0.5–0.75% of self-inflicted deaths.¹

Cutting injuries are usually found on the neck and on the internal surface of the arms with varying depth which is superficial in tentative marks and far deeper in fatal injuries. In most cases few injuries are present and a high number of wounds is rare.²

Stabbing injuries are usually found on the left side of the chest and on the neck. $^{3.4}$ Literature data show that the number of stabs can vary from one up to more than $90.^5$

We present an unusual case of deadly suicidal stabbing and cutting.

2. Case report

A 36-year old male was found dead in a prone position inside a pub bath (Fig 1). Witnesses reported to have seen the victim entering the bathroom and stated that at the moment he did not show

any particular behaviour which could raise suspicion of what he was about to do.

A small single-edged blood-stained knife with a 10 cm-blade in length and a width of 1.5 cm approximately at the *ricasso* (Fig. 2) was discovered on the top of the water cistern by the police officer. The first inspection revealed clothing laceration in the left sternal region, multiple sharp weapon wounds at the usual sites of self-inflicted injuries – like the neck and the forearms – and multiple stab injuries in the chest. Due to the multiple and cavity-deep neck cut wounds it was possible to hypothesize a carotid artery injury as a bloodstain pattern compatible with high pressure blood exiting from a severed artery.

2.1. Autopsy findings

An autopsy was performed 48 h after death.

The body presented no *rigor mortis*, as it had already completely resolved, and faint post-mortem *livor mortis* on the back because of the position change during crime scene investigation.

A total of 39 stab and incised wounds during the post-mortem external examination were found:

(1) The neck showed on the left side three deep cut injuries (the bigger one 8 cm long) (Fig. 3) with hesitation marks but none reached the vagus nerve, the left internal jugular vein

^{*} Corresponding author. Tel.: +39 010 3537838; fax: +39 010 3537643. *E-mail addresses*: francesco.ventura@unige.it (F. Ventura), alessandro. bonsignore@unige.it (A. Bonsignore), gallo_massimo@libero.it (M. Gallo), federica. portunato@hotmail.it (F. Portunato), fdestefano@unige.it (F. De Stefano).



Fig. 1. Crime scene.

or the carotid artery (Fig. 6). The wounds tracts were directed downwards and to the right, thus it was inferred that the victim was right-handed as it was later confirmed by his relatives.

- (2) Chest observation revealed nine stab wounds (measuring 1–3 cm in length) covering an area of 7 cm in vertical plane and 4.5 cm in the horizontal plane (Fig. 3). The fourth, fifth and seventh ribs were involved and an injury punctured the heart apex leading to a 80 ml haemopericardium.
- (3) Right forearm flexor surface presented 14 incised wounds, every one superficial and of the same length (6 cm approximately) (Fig. 4).
- (4) The left forearm flexor surface showed 13 parallel transverse cut wounds, ranging in length between 4 cm and 8 cm (Fig. 5). Twelve of these were superficial and one was deep enough to sever the radial artery with a 2.5 cm linear scratch.

All the wound edges were clean and showed haemorrhagic infiltration.

All internal organs were pale.

The victim neither had a psychiatric history, differently from what it is usually described in cases of suicide, 6-8 nor had attempted suicide before. Moreover, toxicological examinations were negative for drugs and alcohol in blood and in urine.

After the evaluation of all the wounds death was ascribed to haemorrhagic shock following left radial artery injury.



Fig. 2. The weapon.



Fig. 3. Neck and thorax lesions.

3. Discussion

Differing from usual suicides with knives – which are quite common and broadly described in literature – some exceptional cases deserve specific attention as of the peculiar way they have been carried out.^{9–11}

The incidence is more common in males. 12,13

The authors describe a case in which suicide was performed with an uncommon method, i.e. by multiple stabbing and cutting.

The case is about a man who committed suicide using a small single-edged knife (Fig. 2).

The man was not suffering from any physical or mental disorder and was not under any medication.

At autopsy a total of 39 stab and incised wounds, most of them superficial, were found on neck, chest (Fig. 3) and both forearms.



Fig. 4. Multiple cutting wounds at the right forearm.



Fig. 5. Fatal radial artery injury in a complex of multiple cutting wounds at the left forearm.

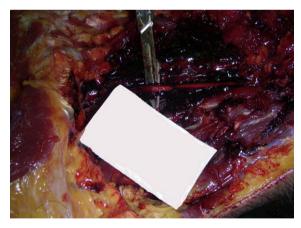


Fig. 6. Absence of lesions of the carotid artery.

The cut wounds at the neck were quite deep but none of these involved the vagus nerve, the left internal jugular vein or the carotid artery.

As usually¹⁴ chest injuries were stab wounds located on the left side; one of these incised the heart apex and was associated with about 80 ml of blood in the pericardial cavity.

Right forearm flexor surface presented fourteen incised wounds (Fig. 4).

Left forearm flexor surface showed 13 transverse cut wounds, one of which was deep enough to sever the radial artery (Fig. 5), representing the most important injury as a bloodstain pattern compatible with high pressure blood exiting from a severed artery was found on the scene.

Consequently death was attributed to haemorrhagic shock following left radial artery injury after all other wounds had been taken into consideration.

Generally multiple stab and incised wounds raise a homicide suspicion¹⁵ as the incidence of suicidal self-stabbing is low among suicides.¹⁶ However circumstantial evidences, the statements of the pub owner and the witnesses, autopsy findings, the absence of defence wounds on the body, the presence of injuries located in accessible sites for the victim's hands and the morphological characteristics (length, depth, direction, vitality) of the wounds, plus finally the presence of the offending weapon near the body of the deceased, left no doubt that this was a suicide.

Thus, the authors suggest that a complete forensic approach by means of crime scene investigation, autopsy as well as toxicological analysis is fundamental in discriminating between homicide and suicide.

4. Conflict of interest

None declared.

References

- Karger B, Niemeyer J, Brinkmann B. Suicides by sharp force: typical and atypical features. Int J Leg Med 2000;113:259–62.
- Viel G, Cecchetto G, Montisci M. An unusual case of suicide by sharp force. Forensic Sci Int 2009:184:e12-5.
- Bernemann D, Arnhold-Schneider M. Mechanisms of injuries of cut and stab wounds of the neck. Laryngol Rhinol Otol (Stuttg) 1988;67:382-4.
- Srisont S, Peonim AV, Chirachariyavej T. An autopsy case report of suicide by multiple self-cutting and self-stabbing over the chest and neck. J Med Assoc Thai 2009;92:861–4.
- Karger B, Vennemann B. Suicide by more than 90 stab wounds including perforation of the skull. Int J Leg Med 2001;115:167–9.
- Start RD, Milory CM, Green MA. Suicide by self-stabbing. Forensic Sci Int 1992:56:89–94.
- Ohshima T, Kondo T. Eight cases of suicide by self-cutting or -stabbing: consideration from medico-legal viewpoints of differentiation between suicide and homicide. J Clin Forensic Med 1997;4:127–32.
- Schmidt P, Driever F, Lock M, Madea B. Evaluation of atypical stab and incision wounds in a case of combined suicidal injuries. Arch Kriminol 2002;210:28–38.
- 9. Lieske K, Püschel K, Bussmann E. Suicide by 120 stab wounds of the chest? *Arch Kriminol* 1987;**180**:143–9.
- Mitra K, Richards PJ, Oakley PA. Self-inflicted transcranial stab wound of the pons. *Injury* 2002;33:374–6.
- Saint-Martin P, Prat S, Bouyssy M, Sarraj S, O'Byrne P. An unusual death by transcranial stab wound: homicide or suicide? Am J Forensic Med Pathol 2008;29:268-70.
- 12. Byard RW, Klitte A, Gilbert JD, James RA. Clinicopathologic features of fatal self-inflicted incised and stab wounds: a 20-year study. *Am J Forensic Med Pathol* 2002;**23**:15–8.
- 13. Fukube S, Hayashi T, Ishida Y, Kamon H, Kawaguchi M, Kimura A, Kondo T. Retrospective study on suicidal cases by sharp force injuries. *J Forensic Leg Med* 2008;**15**:163–7.
- 14. Rautji R, Rudra A, Behera C, Kulshrestha P, Dogra TD. An unusual suicide by stabbing: a case report. *Med Sci Law* 2003;**43**:179–81.
- Scolan V, Telmon N, Blanc A, Allery JP, Charlet D, Rouge D. Homicide-suicide by stabbing study over 10 years in the Toulouse region. Am J Forensic Med Pathol 2004:25:33-6.
- Kuroda N, Saito K, Takada A, Watanabe H, Tomita A, Murai T, Yanagida J. Suicide by self-stabbing in the city of Tokyo – a review of accumulated data from 1976 to 1995. Nihon Hoigaku Zasshi 1997;51:301–6.